37. (Amended herein) The method [preparation] of claim 35, wherein said [the] transgene construct further comprises a promoter wherein the nucleic acid is under the control of said [the] promoter.

38. (Amended herein) The method [preparation] of claim 37, wherein said [the] promoter is a tissue specific promoter.

39. (Amended herein) The method [preparation] of claim 38, wherein said [the] tissue-specific promoter is a promoter preferentially expressed in mammary gland epithelial cells.

40. (Twice Amended) The method [preparation] of claim 39, wherein said [the] promoter is selected from the group consisting of a β-casein promoter, a β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

41. (Amended herein) The method [preparation] of claim 37, wherein said [the] promoter is a caprine promoter.

42. (Amended herein) The method [preparation] of claim 35, wherein said [the] nucleic acid encodes a polypeptide selected from the group consisting of a hormone, an immunoglobin, a plasma protein, and an enzyme.

43. (Amended herein) The method [preparation] of claim 35, wherein said [the] nucleic acid encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basis protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythropoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α-1-antitrypsin.

Please cancel the claims as indicated above

56. (Twice Amended) The [preparation] method of claim 96 [31], wherein [the] said second non-human differentiated somatic cell or cell-lines [somatic cells] are fibroblasts.

57. (Twice Amended) The method [preparation] of claim 56, wherein said [the] fibroblasts are primary fibroblasts.

58. (Twice Amended) The method [preparation] of claim 56, wherein said [the] fibroblasts are primary derived fibroblasts.

Please cancel the claims as indicated above

91. (Twice Amended) A method of preparing a genetically engineered transgenic mammal [cell line], comprising:

(a) inseminating a first female non-human mammal recipient with semen from a transgenic non-human animal of the same species known to have a transgene present and expressed;

(b) obtaining a transgenic non-human embryo from [the] said first female recipient;

(c) obtaining a somatic cell from said [the] embryo; [and,]

(d) culturing [the] said differentiated somatic cell in a suitable medium, such that a differentiated somatic cell line is obtained[.] and,

(e) performing a nuclear transfer procedure with said non-human differentiated somatic cells to produce at least one transgenic mammal at least heterozygous for said first DNA sequence;

wherein said first DNA sequence encoding a desired gene is actuated by a tissue specific promoter.

92. (Amended herein) The method [preparation] of claim 96 [31], wherein [the] said second non-human differentiated somatic cell or cell-line cells are obtained from an embryonic goat on or after day 10 of embryogenesis.

93. (Amended herein) The method [preparation] of claim 96 [31], wherein said [the] second non-human differentiated somatic cell or cell line preparation is kept in an airtight container.

Please cancel the claims as indicated above

Please add claims 96 through 119 as follows:

96. (New) A method for the accelerated production of transgenic animals comprising:

a) transfecting a first non-human differentiated somatic cell or cell-line with a transgene construct containing a first DNA sequence;

b) selecting a transfected cell or cell-line into which said first DNA sequence has been inserted into the genome of said first non-human differentiated somatic cell or cell-line;

c) performing a first nuclear transfer procedure to generate a first transgenic animal at least heterozygous for said first DNA sequence;

d) performing a biopsy or other cell selection technique to obtain cells to establish a second non-human differentiated somatic cell or cell-line from said first transgenic animal;

e) characterizing said second non-human differentiated somatic cell or cell-line using known molecular biology methods to ensure that the selected said

second non-human differentiated somatic cell or cell-line is at least heterozygous for said first DNA sequence; and

f) performing a second nuclear transfer procedure with at least one of said second non-human differentiated somatic cells to produce at least a second transgenic animal at least heterozygous for said first DNA sequence.

97. (New) The method of claim 96, wherein said first transgenic animal is at an embryonic stage of development.

98. (New) The method of claim 96, wherein said first transgenic animal is at a fetal stage of development.

99. (New) The method of claim 96, further comprising developing said first transgenic animal into an adult non-human animal.

100. (New) The method of claim 96, wherein said first transgenic animal is a mammal.

101. (New) The method of claim 96, wherein said first DNA sequence encodes a desired protein;

102. (New) The method of claim 96, wherein the genetic composition of said first transgenic animal is characterized to confirm the presence and expression of the transgene.

103. (New) The method of claim 96, wherein said first nuclear transfer procedure further comprises transferring the nucleus of said transfected cell into a suitable enucleated recipient cell of the same species, thereby obtaining a reconstituted cell.

104. (New) The method of claim 96, wherein said first transgenic animal is biopsied so as to characterize the genome of said first transgenic animal.

105. (New) The method of claim 96, wherein at least one of the cells from said second non-human differentiated somatic cell or cell-line is expanded through cell culture techniques for use in said second round of nuclear transfer so as to produce a multiplicity of animals transgenic for said DNA of interest.

106. (New) The method of claim 100, wherein the source of said differentiated somatic cell or cell-line is an ungulate.

107. (New) The method of either claims 106, wherein said differentiated somatic cell or cell-line is from an ungulate selected from the group consisting of bovine, ovine, porcine, equine, caprine and buffalo.

108. (New) The resultant offspring of the methods of claim 107.

109. (New) The method of claim 96 wherein said first DNA sequence codes for a biopharmaceutical protein product.

110. (New) The method of claim 109 wherein said first DNA sequence encoding a desired gene is actuated by at least one beta casein promoter.

111. (New) The resultant milk derived from the offspring of the methods of claim 108.

112. (New) The method of claim 96, wherein said second non-human differentiated somatic cell or cell-line is obtained from said first transgenic animal by known tissue dissociation means including enzymatic means and/or mechanical means.

113. (New) The method of claim 96, wherein said second non-human differentiated somatic cell or cell-line is selected from a group of cell types present in said first transgenic animal including:

a) fibroblasts

b) cumulus cells

c) neural cells

d) mammary cells; and

e) myocytes.

114. (New) The resultant offspring of the methods of claim 91.

115. (New) The method of claim 91 wherein said transgene codes for a biopharmaceutical protein product.

116. (New) The method of claim 115 wherein said tissue specific promoter is a beta casein promoter.

117. (New) The resultant milk derived from the offspring of the methods of claim 114.

118. (New) The method of claim 91, wherein said second non-human differentiated somatic cell or cell-line is obtained from said first transgenic animal by known tissue dissociation means including enzymatic means and/or mechanical means.

119. (New) The method of claim 91, wherein said second non-human differentiated somatic cell or cell-line is selected from a group of cell types present in said first transgenic animal including:

a) fibroblasts

b) cumulus cells

c) neural cells

d) mammary cells; and

e) myocytes.

Please also see a Claims Appendix with a complete listing of the claims as amended without correction marks.